

NEW ZEALAND

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Location: 35° south – 45° south (similar latitude to Madison, but oceanic climate)

Size: similar to Oregon USA, 186% of Poland, 110% of UK

Percentage farmed: 56

of which: 14% dairy (4.5M cows)
70% sheep/beef/deer (30M sheep, 4.5M beef, 1M deer)
4% arable
12% forestry

Population: 4.5M

**CANTERBURY CASE STUDY FARMS – DAIRY (100% IRRIGATED)****Imperial**

Area: 550 acres

Cows: 770

Production: 8.25M lbs

MS %: 9.12% (5.2% fat)

Per cow = 15000 lbs (corrected to 3.5%)

= 55 lbs/day milked (270 days/year)

Staff = 4 (all capable of doing all jobs, but well paid)

wages = 16% of total costs

Diet = 80% pasture

EBIT: \$2,500 - \$3,500/ha

Land value: \$38,000/ha

Fonterra shares: \$ 8,000/ha

Stock: \$ 6,000/ha

Plant: \$ 1,000/ha

TFC: \$53,000/ha

Return on Capital = 4.7-6.6%

Metric

220 ha

770

342,000 kg MS

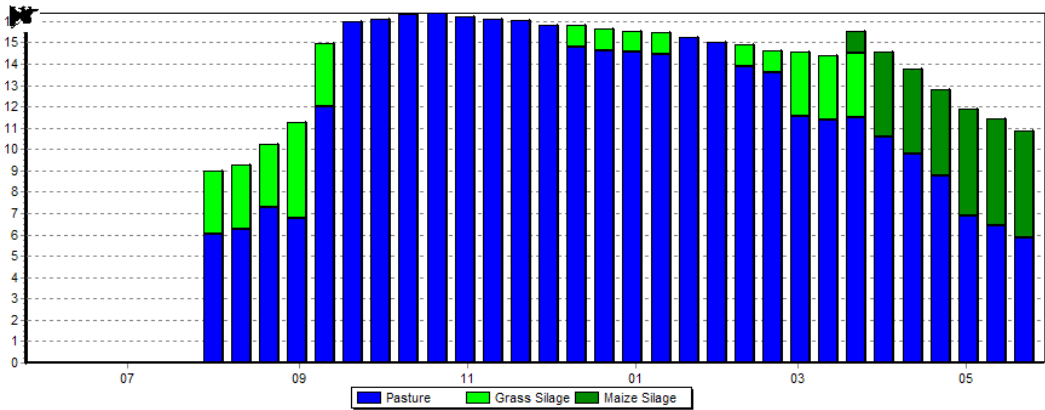
6800 kg milk

25kg/day





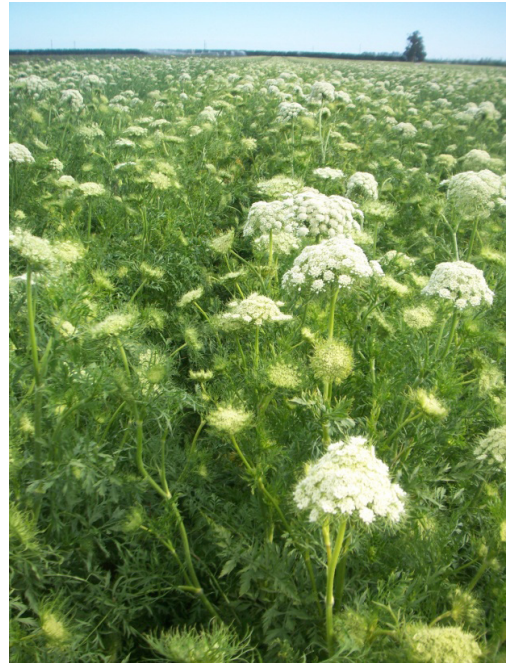
DAIRY COW DIET MAKE-UP



ARABLE (100% IRRIGATED)

- Area: 573 acres
- 232 ha
- Crops: 27% wheat
- 9% process peas
- 9% process potatoes
- 9% maize silage (sold)
- 9% ryegrass seed
- 9% white clover seed
- 6% carrot seed
- 3% radish seed
- 9% fodder beet (for wintering dairy cows)
- 9% kale (for wintering dairy cows)

EBIT: US\$1,600/ha
 Land value: \$28,000/ha
 Plant: \$ 2,000/ha
 Working capital: \$ 1,500/ha
 TFC: \$31,500/ha
 Return on Capital = 5.1%



SHEEP/BEEF/DEER (25% IRRIGATED)

Area = 800 ha
 2,500 sheep
 1,000 Friesian bulls
 1,500 deer
 EBIT: \$ 800/ha
 Land value: \$12,600/ha
 Stock: \$ 1,500/ha
 Plant: \$ 500/ha
 Working capital: \$ 800/ha
 TFC: \$15,400/ha
 Return on Capital = 5.2%



MARKETS

MILK

2% of global production

35% of cross border trade (along with EU, USA, Australia)

53% powder, 32% fat based, 12% protein based

MEAT

10% of production, 60% of cross border trade in lamb

40% of production, 90% of cross border trade in venison (excl intra Europe)

1% of beef production, 6% of global trade, but very important in lean been for hamburger trade

ARABLE

Very small grain producer (not self sufficient) but one of the worlds three largest seed and vegetable seed nurseries along with Denmark & Oregon (USA).

KEY ISSUES

Interface between environment standards and productivity

- Environmental standards are strict, but have not historically been strict enough.
- Specific standards around effluent, nutrient management (compulsory nutrient management plan), water management, (Sustainable Dairy Water Accord).
- Ultimate cost of non compliance is heavy fine and non collection of product.
- In Canterbury, we produce around three times as much milk, meat and wheat per mm irrigation water as 20 years ago. (higher productivity, smart irrigation), and four times as much product/kg N leached.
- Almost all capital spend is going into areas that improve environmental outcomes, usually in association with productivity gains.
- Irrigation development involves large scale storage, which has increased the cost of infrastructure development by tenfold in a decade.
- The driver to irrigation is reliability of production.
- The NZ public (rightly) have very high expectations of environmental standards. (Christchurch is one of only two global cities not to require treated water).
- A new means of agreement through having all stakeholders round the table seems to be working.
- The infrastructure cost is driving output away from sheep production to dairy and arable on flat land, but sheep & deer are increasing in number on hill country.

Food Safety

- We export to global markets.
- Quality standards have to meet the level of the most demanding markets (typically Japan and EU, but increasingly, China).
- Food testing techniques are more sensitive (driven by crises like melamine in China, and new technology such as DNA testing).
- High prices encourage opportunists to defraud value chains.
- Traceability issues such as horse meat in Europe, rat meat in China, DCD traces in NZ milk powder all underpin the need for vigilance.

Credit availability

- Farm credit readily available (especially dairy).
- Four major Australasian trading banks plus Rabobank. These banks are five of the nine “AA” rated banks globally.
- Average debt levels high (NZ average is 45% gearing).
- Result of high generational turnover, productive investment, farm expansion.
- New Zealand 3rd highest farm gearing in world (behind Denmark and Netherlands) USD 70/cwt, or \$USD 1.80/kg milk.
- Interest rates high relative to USA and Europe (6% fixed for 5 years, 5.2% variable).
- Interest rates unlikely to reduce as the Government is working hard to keep inflation under 2%.

Market volatility

- Our global markets outside Asia and Australia are all practicing quantitative easing.
- Weak Yen, USD, Euro is resulting in a high Australian and New Zealand dollar.
- We can not print money as we do not have a deflationary environment.
- High, but volatile soft commodity markets (as result of low \$US) are offset by very high New Zealand dollar.
- Small buffers of international commodity stocks inevitably create volatility which can be accentuated by exchange rate movements.

Market realignment

- Our markets are moving from the west to the east.
- China now takes 30% of our milk and lamb, and may take 30% of our beef and timber.
- The lesson learnt from the EU in the 1970’s is that we want to maintain market diversity.
- To date, Chinese capital investment in New Zealand has been much lower in practice than publicity would indicate.
- Most Chinese investment to date has been in the processing sector rather than land.

Capability

- The resurgent rural sector in New Zealand is creating major demand for
- Rural professionals
- On farm management capability
- We are struggling to supply the demand.
- We estimate that Ag Science and Commerce students need to increase 500%.
- The average 30 year old farmer in our area needs to juggle production skills, human resource, financial management, risk management, compliance, climate management, capital spend, and manage a mortgage of US\$3.2M.

Inter-relationship between business, science, and education

- New Zealand did a poor job through the 1990’s when the three sectors became “disconnected” as agriculture fell out of favour.
- A major change in government mind-set occurred five years ago.
- Lincoln University and the AgResearch Lincoln campus are being rebuilt (after the earthquake) as a part of an expanded “Lincoln Hub”. Lincoln has just been invited to join the “Euro league of Life Science” Universities.
- Growth in the “agricultural silicon valley between Christchurch/Lincoln/Ashburton/Methven” is massive.

- A similar “Agrifood” Hub is expanding on the Massey University campus in the North Island.
- None of the current growth would be possible without the foundations laid by the economic reforms of the 1980’s.

Rebuilding our second largest city

- The chance for a world class “small city” (400,000 pop).
- Central planning is underpinning the strategy, but has slowed the rebuilding process.
- Voted one of top five destinations by “Lonely Planet”.

THE FUTURE

- With market based economics comes volatility.
- Ability to generate cashflow and grow equity excites young people.
- Proportion of employees is rising as farms increase in size.
- Average age of farmers is decreasing.
- Ownership models have diversified, with contract milking, sharemilking, and equity partnerships all common, but much easier with dairy farming.
- A greater proportion of industry participants have vocational qualification (8% have degrees in agriculture).
- The industry objective is to have every farm owner and/or managers with a degree or university diploma.
- Growth will slow as credit availability slows and environmental compliance requirements tighten further.
- Fonterra has given dairying direction and strategy, even though every dairy farmer has a choice of processor.
- We are in restructuring mode in our meat industry, with processing overcapacity accentuating market volatility.
- Irrigated parts of temperate New Zealand will grow their importance as one of the world’s most important seed nurseries.
- Likely to become more focused on output per unit of natural resource.
- In a world where competition to supply will be less important, free trade will encourage collaborative rather than competitive behaviour.
- New Zealand is ideally placed as an “alternative” for high end product where local supply is not available or not suitable.
- We can only feed 30M people!